

CONVAIR
A Division of General Dynamics Corporation
(San Diego)

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DESIGN INFORMATION BULLETIN

NO.: 9.001

CONVAIR REPORT NO. ZM-22-005

PAGE: 1 of 2

MODEL 22 AIRPLANE

DATE: 9-21-56

REV.: 11-16-56

REV.: 1-10-57

REV.: 4-1-57

MOCKUP

CPO 56-73

- Ref. (a) Detail Specification ZD-22-002 dated 7 September 1956
(b) Detail Specification ZD-22-003 dated 20 September 1956
(c) CPO 56-73 dated 30 April 1956
(d) Memo "CV-880 Mock-up Revisions" dated April 2, 1957

1. CPO 56-73 dated 30 April (Ref. c) established as a function of the Basic Task, a requirement for a complete mockup, including one wing with Nacelles, one horizontal empennage, vertical empennage, complete fuselage and landing gear. The cockpit will be complete including instruments, lighting and controls. The fuselage and wing will contain complete systems including radio, air conditioning equipment, fire detection and extinguishing systems, main and nose landing gear installations, complete cabin arrangements including lighting, baggage and cargo areas, service connections and fittings, and all access openings and doors. Wiring and tubing routing will be handled separately on the metal mockup.

- 1B. The Equipment Design Section has been assigned the responsibility of coordinating all engineering mockup design and release of information to the shop.
- 1C. For planning and coordination purposes, all groups are requested to provide mockup area requirements. These requirements should be contained on ditto master work sheets, and should establish systems and components, location, attachment, routing space and access requirements, exclusive of wiring and tubing routing. Revisions required by design or coordination during mockup shall be processed through the Equipment Design Section by the responsible Design Group to assure current design status.
- 1D. The Project Office will coordinate all customer changes with the respective Design Groups. The Design Groups are responsible in coordinating such changes with the Equipment Design Section.
- 1E. Since the possibility of using actual equipment components results in an improved mockup, reasonable judgement shall be exercised toward obtaining by consignment or loan, through ABX procedures, actual articles from the vendor. Where outright procurement is deemed necessary, such procurement shall be authorized by the Project Office. Physical articles which represent the external size, shape and connections required, but are not functionally complete, will satisfy mockup requirements.
- 1F. Groups are urged to review the contractual mockup requirements shown in D.I.B. 4.002 pages 4, 5 and 6 for compliance. A case in point is the exterior lighting requirement which has not been shown present customers.

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PAGE: 2 of 2

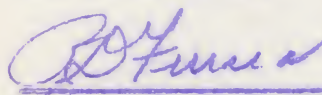
DATE: 9-21-56

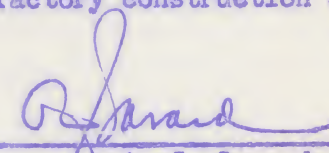
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REV.: 1-18-57

REV.: 4-1-57

- 2A. In addition to the complete mockup, there will also be required a fuselage modular section mockup from the floor level upwards in which a future customer's interior cabin requirements will be configured.
- 2B. A cabin area from aft pilot's bulkhead to forward bulkhead of aft lavatory. This cabin module to have a 12 place lounge, 9 seat rows and aft entrance way area. (see Ref. d)
- 2C. A cockpit module including lighting for Delta Airlines (done).
- 2D. The sectional mockups shall be mounted on adjustable height casters which assures the same floor level for all units. These items shall be readily moveable and shall incorporate anti-rolling devices.
3. A functional mockup of the engine, thrust diverter, silencer and equipment in a separate pod and pylon shall be made. The mockup engine will be supplied by General Electric Co. This mockup to include engine fire detection and extinguishing mockups. (in work 4-1-57)
4. A wing trailing edge half scale section from the rear spar aft shall be made from Wing Sta. 270 to Wing Sta. 410 including a moveable portion of the flap and spoiler. The full scale basic mockup is to have spoilers and flaps painted on. (done)
5. A 40 inch section of the lefthand elevator from the stabilizer rear spar aft to be constructed full scale from B.L. 99 to B.L. 139 incorporating the Mechanism and Aerodynamics balance boards. The elevator on the full scale basic mockup shall be fixed. (done)
6. A full scale mockup of the wing trailing edge from the wing rear spar aft and from B.L. 0 to the outboard side of the outboard pylon shall be made for design space control. This unit shall incorporate a minimum section of fuselage fillet, underwing fairing, and part of bulkhead 926. The configuration shall be based on wing information current with April 1 revision of this D.I.B. This mockup to have spoiler, aileron, flap, and all mechanical equipment envelopes installed. Motion path areas shall be represented with fan shaped wood blocks attached to all cylinders or linkages where required to reserve space. (in work 4-1-57)
7. A wing inter spar box skeleton from W.S. 224 outboard to tip shall be constructed to determine wing access door location and optimum fuel system installations. It is not intended to review this with a customer; rather, it will be reviewed with Convair production departments to obtain a satisfactory construction sequence. (in work 4-1-57)


R. R. Hoover
Chief Design Engineer


A. J. Savard
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